Action Plan 12 Protecting Open Space

Problem[145]

There are many different land uses within the Buzzards Bay watershed, but much of the watershed remains undeveloped. However, undeveloped land has been disappearing at a rapid rate. In 1971, 64.5% of the watershed consisted of open and unperturbed forestlands and only 12.9% was developed[146]. By 1999, open and unperturbed forested lands decreased to 56.5% of the watershed, while developed lands increased to 19.8%. The percent of lands classified as developed continues to increase, especially in the more rapidly growing communities.

There are ecological, cultural, and aesthetic reasons to protect open space. Naturally vegetated landscapes control flooding, can protect water supplies, reduce erosion, reduce pollutants from watersheds, and provide upland and wetland habitat. Despite these and other benefits, protection of open space and habitat is a financial and political challenge for most municipalities; several communities in the Buzzards Bay watershed still have not identified protection needs through open space and master plan development and updates. Some municipalities have considerable amounts of open space; some have modest amounts of open space.

Goal

Goal 12.1. Preserve the ecological integrity of Buzzards Bay and its watershed by increasing the amount of permanently protected open space.

Objectives:

Objective 12.1. Improve and protect coastal and inland surface water quality through land protection.

Objective 12.2. Protect biodiversity in the watershed.

Objective 12.3. Protect the region's groundwater supplies.

Objective 12.4. Improve the land conservation community's ability to protect open space.

Approaches

Meeting the goals of this action requires that towns and land trusts acquire properties for conservation purposes, or property owners agree to protect permanently their properties for conservation purposes, or in the case of farmlands and surrounding habitat, for farming purposes. Because the acquisition of open space can be expensive, even for properties mostly wet, the use of conservation restrictions and agricultural preservation restrictions are important tools to encourage private open space protection. These private land protection strategies are driven by financial and tax benefit incentives offered by government.

Because the purchase of open space can be costly, and state and local governments typical have limited funds for these purchases, it is important that municipalities develop broad strategies and goals for open space protection. These can be articulated in municipal open space plans. These plans must be updated every seven years to remain valid and ensure that the municipality is eligible to receive state grants for open space protection.

Another mechanism to generate local funds is for municipalities to adopt the Community Preservation Act. By adopting this legislation, municipalities can levy a tax fee on property transfer, and some of this revenue is matched by a state fund.

Finally, open space can be protected at no cost to government by allowing cluster development and transfer of development rights. These innovative approaches require approval by the municipal legislative body and planning boards.

Costs and Financing

The preparation and updating of open space plans can be done in-house by municipalities with assistance from the Buzzards Bay NEP or land trusts, or completed by a contractor to the municipality (perhaps a cost of $20,000). Raising money for land acquisitions can be met by donations, municipal appropriations, or by grants. Local adoption of the Community Preservation Act is the best approach to ensure a local revenue stream. Often land acquisitions are complex and may involve funding from multiple sources.

Measuring Success

Ultimately, the number of acres of wetlands and habitat protected (by communities and in the watershed) is the principal mechanism of tracking the success of this action plan. Programmatic tracking of municipal actions, like the approval of open space plans, adopting the Community Preservation Act, and tracking the number of towns without valid open space plans may also be used.

[145] This is a new action plan not in the 1991 CCMP, although the earlier document did have specific recommendations to protect open space and valuable habitat. Related recommendations are contained in the LID, Stormwater, and Nitrogen Management Action Plans.

[146] Estimated from the MassGIS coverage "Land Use (1951-1999)" using the categories of Mining, Residential, Commercial, Industrial, Transportation, and Waste Disposal land uses for "developed land." Land use for 2005 is available, but a different methodology was used, so it is not directly comparable. Other methodologies can yield higher estimates of forested land, especially if tree cover on developed lots is included.

Background

Preserving open space make sense from both an ecological and cultural point of view. Naturally vegetated landscapes reduce erosion by slowing the rate of water runoff; control flooding by regulating water levels in rivers and streams; provide habitat for diverse species; and protect our inland and coastal water resources by acting as filters for nitrogen and sediment. Additionally, protected lands provide areas for recreational activities, protect historically significant places, and preserve the charm and character of the areas in which we live. Open space also makes sense for a town's tax base because undeveloped, protected land does not require costly community services, such as schools, police, and road maintenance. Many reports have documented the value of open space when compared to the high costs of community services.

Poorly planned development, on the other hand, pollutes the environment through stormwater runoff from roads and lawns and contamination from onsite septic systems; impedes natural water flows; reduces groundwater recharge; fragments and degrades habitat; acts as a physical barrier to wildlife migration; and leads to the loss of our sense of place.

Over 66,000 acres, (25% of the total land area, see Table 39, Figure 90) of the Buzzards Bay watershed, from Fall River to Gosnold, exists as permanently protected open space. The amount of protected acreage within each watershed town varies and is dependent on many factors. Local dedication to land protection, availability of affordable land, eminent threats from development, and socio-economic factors all contribute to the culture of land conservation in each municipality. Municipalities with the highest percentage of open space are those that contain a state forest, wildlife management area, or water supply reserve. Overall, there have been continued successes in the efforts to protect open space in the Buzzards Bay watershed (Figure 91).

Table 39. Protected lands in the watershed summarized by municipality (as of September 2011).

Town	Protected Acres in Watershed [a]	Total Acres in Watershed	Percent OS in Watershed [b]
Acushnet	1,040	12,082	9%
Wareham	2,428	23,772	10%
Carver	2,398	21,248	11%
New Bedford	2,027	12,456	16%
Freetown	523	3,101	17%
Rochester	3,591	21,092	17%
Westport	4,864	28,399	17%
Falmouth	2,332	13,417	17%
Fairhaven	1,538	7,942	21%
Mattapoisett	2,835	11,196	25%
Dartmouth	10,144	39,639	27%
Gosnold	1,250	4,320	28%
Middleborough	3,187	11,023	30%
Marion	3,172	9,036	37%
Plymouth	10,738	24,102	45%
Bourne	10,589	21,904	48%
Lakeville	73	136	54%
Fall River	4,918	6,802	73%
Sandwich	1,201	1,636	73%

a Acres of protected open space includes only protected land that falls within the Buzzards Bay watershed area and includes surface water in the parcel. The actual acreage within an entire town may be much greater.

b Percentages of protected open space is defined here as the area of protected land that falls within the Buzzards Bay watershed area divided by the municipal area including freshwater ponds in the watershed.

An Open Space Protection Success Story

The Buzzards Bay NEP is a key partner with the Buzzards Bay Coalition, preparing hundreds of maps and conducting GIS land use evaluations for targeted acquisitions. Our support is integral in the Coalition's outreach for their program, and has helped the passage of municipal town meeting legislative articles in support of conservation land acquisitions.

An example of the success of the Coalition is the fact that they helped secure 274 acres of the Mattapoisett River Valley in 2004. Building upon a Department of Environmental Protection grant that funded 60% of the acquisition cost, the Coalition brought together an array of conservation partners involving the Mattapoisett River Valley Authority and the Rochester Land Trust. In April 2004, the arduous task of piecing together funding sources came to a finish when a Rochester resident stepped forward and pledged $10,000 to close the gap. An additional acquisition the following year protected 13 adjoining parcels of land near the drinking water supply wells for the towns of Fairhaven, Mattapoisett, and Marion. These parcels include mature pine and oak forests, floodplain wetlands, vernal pools, and wet meadows. The final phase of conservation occurred in 2006 by the Rounseville family protecting more than 2.6 miles of river shoreline between Mill Pond and Wolf Island in the Mattapoisett River Valley.

The Commonwealth of Massachusetts

The Commonwealth of Massachusetts is an important player in land protection in southeastern Massachusetts and owns more than 36,000 acres - 55% of all the protected land - in the Buzzards Bay watershed. The Commonwealth generally purchases land that has extraordinary natural resource features and prefers to buy lands that build on its existing wildlife management areas and reserves. Some of the Commonwealth's most notable properties include the southeastern Massachusetts Bioreserve, Rocky Gutter Wildlife Management Area, Myles Standish State Forest, Haskell Swamp Wildlife Management Area, Nasketucket Bay State Park, Demarest Lloyd State Park, Horseneck Beach State Park, and the Upper Cape Water Supply Reserve. The Commonwealth's large landholdings form an arc across the watershed and are critical to maintaining the region's biodiversity.

Figure 90. Protected open space in the Buzzards Bay watershed as of 2011.

The Commonwealth protects an additional 5% of the watershed's open space through the Agricultural Preservation Restriction (APR) program. Administered by the Massachusetts Department of Agricultural Resources (MDAR), the APR program is a voluntary program aimed at protecting the state's most significant farmland soils. It offers a non-development alternative to owners of important agricultural lands by purchasing the development rights to the land. The program offers to pay farmers the difference between the fair market value and the agricultural value of their land. In exchange, the farmer agrees to place a permanent deed restriction on the property that limits any future development. The APR program is highly competitive with preference given to working farms located in agriculturally productive regions of the state with highly productive agricultural soils.

In the Buzzards Bay watershed, the majority of working farms (not including cranberry bog operations) exist in the towns of Westport and Dartmouth. Westport in particular is one of the top-producing farm communities, and the leading dairy producing area, in the Commonwealth. The APR program has been actively working with these towns and local land conservation organizations to protect hundreds of acres of farmland.

Role of Municipalities

Municipalities play the most critical role in watershed land preservation. Conservation commission owned or other deed-restricted municipal lands account for the second largest percentage of open space in the watershed – nearly 13,000 acres or 18%.

Finding sufficient funding for open space acquisitions is often an issue for towns. However, with the enactment of the Community Preservation Act (CPA) [G.L. Ch. 44B] in September 2000, municipalities were provided with a new source of land protection funding. This statewide enabling legislation allows communities to establish a local Community Preservation Fund, to buy open space, protect historic sites, or provide affordable housing. A local surcharge of up to 3% of the real estate tax on real property supports this local fund (surcharge level selected by the municipality). Additionally, the state committed to a matching fund generated by fees charged on certain transactions filed at county registries of deeds. From 2001 to 2007, each CPA community received a distribution from the CPA Trust Fund equal to 100% of its locally raised revenue. Beginning in October 2008 however, the CPA Trust Fund could not sustain the 100% match due to the popularity of the program and reduced real estate activity. The distribution rate fell to 67% for many communities in 2008, and has declined each year since, to a projected 25% in 2011.[147].

[147] CPA Trust Fund receipts from September 2010 to March 2011 totaled $16.8 million CPA Trust Fund receipts information Retrieved from www.communitypreservation.org/, see CPA News.

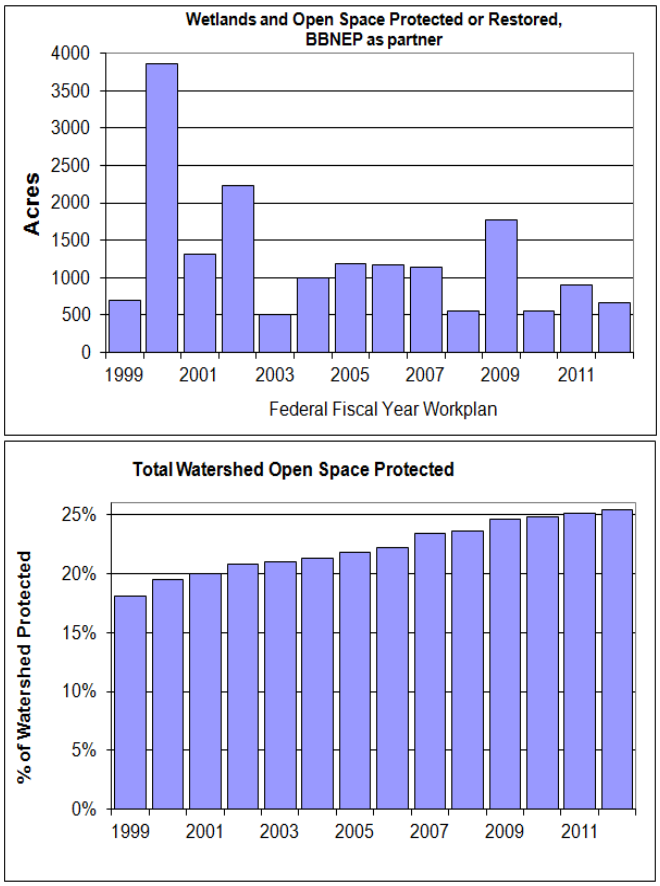

Figure 91. Top: Open space protected annually with some level of assistance from the Buzzards Bay NEP or Coalition as reported in GPRA reports to EPA. Bottom: Total Buzzards Bay open space as % of watershed.

Adopted by municipalities through a ballot referendum, the CPA requires that communities distribute at least 10% of the community's funds to each of the three categories: open space acquisition, historic preservation, and low- to moderate-income housing. Municipalities may distribute the remaining 70% in any combination within the three categories. The selectmen in each municipality appoint a committee, which decides how the funds will be used, and expenditures must be approved by a town meeting vote.

The CPA is an excellent tool to use for open space preservation and 11 Buzzards Bay towns have adopted the Act. They include Acushnet, Bourne, Carver, Dartmouth, Falmouth, Fairhaven, Marion, Mattapoisett, Plymouth, Wareham, and Westport. Three towns (Fall River, Gosnold, and New Bedford) have yet to bring a CPA ballot to the polls. The CPA ballot failed in Rochester and Middleborough.

Non-profit Land Conservation Organizations

Dating back to the early 1970s, land trusts have a long history of protecting land in southeastern Massachusetts. There are currently 10 local and 3 regional land trusts working to protect the southeastern Massachusetts

landscape. Land trusts protect, through acquisitions and conservation restrictions, 20% of the watershed or nearly 14,000 acres.

While the land trust community has made great strides in open space protection, few area land trusts can afford to fund full-time staff members, and most function with only a dedicated board of volunteers. To help the land trust community with their endeavor, the Buzzards Bay Coalition has focused attention on enhancing the land acquisition capabilities of area land trusts by serving as a coordination and service arm to land trusts and property owners. The Coalition develops land protection strategies, provides staff for assistance, and maintains contact with large landowners. The Buzzards Bay NEP works cooperatively with the Coalition by maintaining an open space database and providing high quality Geographic Information System (GIS) maps to the Center.

Buzzards Bay Greenway

First proposed in 1995, the Buzzards Bay Greenway (Figure 92) is a proposed protected land corridor and walking trail that will connect Fall River to Plymouth. The planned greenway would cross 10 town lines and 8 rivers and would connect more than 30,000 acres of protected land with a nearly 75-mile long trail corridor.

This regional land protection initiative received outreach assistance from the National Park Service Rivers & Trails Program and funding assistance from a Massachusetts Department of Environmental Management Greenways and Trails grant and from the Massachusetts Department of Conservation and Recreation.

In 1999, the Buzzards Bay Coalition dedicated the first 5 miles of the Greenway, located on western side of the watershed. In 2000, 10 additional miles were added (see Figure 92).

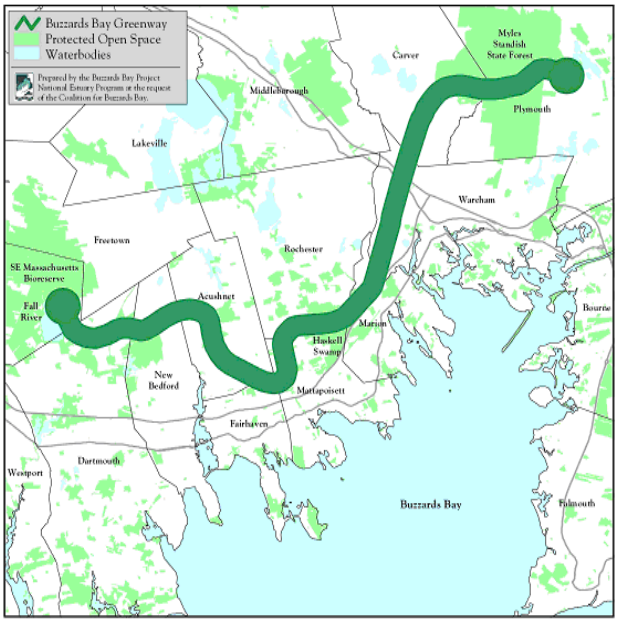

Figure 92. Greenway proposed by the Coalition in 1995.

The acquisitions of contiguous open space properties and creation of wildlife corridors remains a high priority to open space committees and lands trusts.

Major Issues

Municipal Open Space Plans and the Commonwealth Capital Policy

To be eligible for several state grant programs, including open space funding under the Commonwealth's Land Acquisition for Natural Diversity (LAND) Program (formerly called Self-Help), Parkland Acquisitions and Renovations for Communities (PARC) Program (formerly called Urban Self-Help), and Land and Water Conservation Fund grants, municipalities are required to have an approved open space and recreation plan on file with the Division of Conservation Services. These plans must follow an established outline and discuss issues related to population characteristics, growth and development patterns, natural resources, and protection of open space. Towns must update and resubmit their plans to the Division of Conservation Services every seven years to remain eligible for funding.

Municipal open space plans in Massachusetts typically identify the protection of natural resources as among the highest priorities. Specifically, irrespective of the municipality, there is recurring emphasis on the protection of wetlands, wildlife habitat, drinking water supplies, rare species habitat, wetlands, riparian corridors, and linking open space in the region. These goals echo the collective understanding that natural resources are limited, and more importantly, that they are threatened.

Because municipal open space plans provide an opportunity to protect natural resources, and because the plans are a requirement for obtaining land acquisition and protection grants, for more than 15 years, a major focus of the Buzzards Bay NEP has been to assist Buzzards Bay municipalities in developing open space plans. This assistance has ranged from preparing the entire document to preparing sections or maps in support of plan development by municipal open space committees.

The Commonwealth of Massachusetts imposes other requirements besides valid open space plans to be able to receive state funding. The most important of these requirements, adopted in 2005, is that towns must complete and submit annually a "Commonwealth Capital" application.[148] In most grant programs, Commonwealth Capital scores account for 30% of the evaluation score. A summary of Buzzards Bay watershed municipal com-

[148] The Commonwealth Capital application is now an important criterion for dozens of state-funded environmental grant programs. Although the application is technically a requirement, failure of the town to score itself using the state criteria will place that municipality at a competitive disadvantage over communities that do complete the form.

monwealth scores for 2005 - 2009, and environmentally relevant actions completed and the relative ranking of each (as characterized on the Buzzards Bay website) are shown in Table 40 and Table 41.

As noted in state documents, the Commonwealth Capital Policy seeks to "encourage municipalities to work in partnership with the Commonwealth to achieve smart growth. Commonwealth Capital explicitly endorses planning and zoning measures that are consistent with sustainable development principles and encourages municipalities to implement them by using state funding as an incentive." That is, smart growth does not stop growth, but seeks to redirect it to places that are more appropriate. Sustainable practices include zoning techniques such as transfer of development rights (TDRs), cluster or open space residential design, and agricultural preservation district zoning, as well as water resource management, low impact development (LID), and traditional neighborhood development.

Nearly half of the Commonwealth Capital Policies focus on achieving environmental actions, or actions that achieve or support smart growth. Therefore, if municipalities can improve their Commonwealth Capital scores, they not only improve their chances of receiving discretionary state funds, but will also protect or enhance the environment or natural resources.

Because there is such variability in municipalities achieving the environmental goals specified in the Commonwealth Capital application, in 2004, the Buzzards Bay NEP began tracking those actions in the Commonwealth Capital application that also achieve goals in the Buzzards Bay CCMP. Buzzards Bay NEP's website status and trends webpage (buzzardsbay.org/tracking-town-actions.htm) highlights the success of the towns in undertaking key Commonwealth Capital actions as shown in Table 41. The Buzzards Bay NEP continues to encourage municipalities to adopt Commonwealth Capital goals to improve their scores and thus their chances to receive state grant funds.

Developing Regional Open Space Plans

In the 2000s, the EEA began promoting the development of regional open space plans. The purpose of the regional open space plan is to encourage communities and land conservation organizations in the watershed to work cooperatively toward land acquisition and protection goals on a regional scale; to protect biodiversity and safeguard water resources through the protection of undeveloped lands in their natural state; and to help leverage funding and resources for open space protection. In a more pragmatic sense, the regional open space plans help guide state funding by identifying areas that have regional significance, or have significance as part of a watershed priority, and not just an individual municipal priority. In other words, these plans provide a regional context for evaluating town requests for land protection funding.

Because the Buzzards Bay NEP had assisted in the development of numerous open space plans, in 2008 the program created the first Buzzards Bay Watershed Regional Open Space Plan.

Regional Open Space Principles and Recommendations

Today, 25% of the watershed exists as protected open space. However, without a long-term land preservation commitment by watershed towns, new open space acquisitions will diminish in the face of competing expenditures. To ensure continued progress toward open space protection, the Buzzards Bay NEP included in the regional open space plan a series of general recommendations to meet the resource protection needs identified by the Commonwealth, and recommendations already included in existing municipal open space and recreation plans, and recommendations of regional conservation organizations. These recommendations provide guidance for land protection efforts in the watershed and are applicable to municipalities, state, and federal agencies, and land conservation organizations. They also provide the basis of many recommendations contained in this action plan.

Table 40. Commonwealth Capital scores for 2005 - 2009.

(as reported on the status and trends page of the Buzzards Bay NEP's website.)

Town	2005 Score	2006 Score	2008 Score	2009 Score	Relative 2009 Rank
Acushnet	50	44	0	0	☹
Bourne	0	62	46	0	☹
Carver	51	48	0	0	☹
Dartmouth	94	90	0	66	😐
Fairhaven	57	70	64	72	☺
Fall River	92	98	68	69	😐
Falmouth	0	90	0	105	☺
Gosnold	0	0	0	0	☹
Lakeville	53	39	0	39	😐
Marion	48	62	55	0	☹
Mattapoisett	34	43	0	40	😐
Middleborough	0	109	96	90	☺
New Bedford	92	98	0	91	☺
Rochester	22	35	0	43	😐
Wareham	53	82	81	0	☹
Westport	67	78	81	0	☹

KEY (Based on 188 scores statewide for 2005):
☹ = in bottom 50% statewide (score <50)
😐 = in mid 25% statewide
☺ = in top 25% statewide (score>78)
NS = No Municipal Applications for Funds

Table 41. Commonwealth Capital scores that achieve goals in the Buzzards Bay CCMP (2006 status).

Municipality	Current Open Space Plan (4 pts)	TDRs (5 pts)	Cluster Zoning or OSRD (11 pts)	Water Resource Mgmt. (5 pts)	Water Resource Protection (5 pts)	Water Conservation Plan (included in WR Mgmt.)	Open Space Protected (3 pts)	CPA (3 pts)
Acushnet	☹	☹	☹	😐	☺	😐	☹	☺
Bourne	☹	☹	🙂	☹	☺	☹	☺	☺
Carver	☺	☹	☺	☹	☺	☹	☹	😐
Dartmouth	☺	😐	☺	😐	☺	☺	😐	☺
Fairhaven	☹	😐	😐	☹	☺	😐	☹	☺
Fall River	☺	☹	☹	☹	☺	☹	☺	?
Falmouth	☺	🙂	🙂	☹	☺	☹	😐	☺
Gosnold	?	?	?	?	?	?	😐	?
Marion	☺	☹	🙂	☹	☹	☹	😐	☺
Mattapoisett	☹	☹	🙂	☹	☺	☺	😐	☹
Middleborough	☹	☹	☺	☹	☺	☹	😐	☹
New Bedford	☹	☺	😐	😐	☺	😐	☹	?
Plymouth	☺	☹	☺	☺	☺	☹	😐	☺
Rochester	☹	☹	☺	☺	☺	☹	😐	☹
Wareham	☺	☹	☺	☹	☺	☹	☹	☺
Westport	☹	☹	☹	☹	☺	☹	☹	☺

KEY

☺ = Measure, regulation, or policy adopted.

🙂 = Adopted, but not used since 2003 because of disincentives, contradictory laws, or other hindrances.

😐 = Measure, regulation, or policy pending or committed to in Commonwealth Capital Application.

☹ = Failed, never attempted, or not committed to in Commonwealth Capital Application.

? = Failed, never attempted, or committed to, but suitability questionable for community.

From buzzardsbay.org/tracking-town-actions.htm.

A. Protect Critical Natural Resources

Saltwater and Freshwater Wetlands

Wetlands serve many important purposes including flood control, prevention of pollution and storm damage, protection of public and private water supplies, and protection of fisheries, shellfisheries, and wildlife habitat. Wetlands are afforded substantial protection under state wetlands regulations. However, municipalities are encouraged to continue efforts to strengthen local wetlands bylaws to provide greater protection to these important resources. Land conservation organizations should work to establish connections between major wetland systems through protected land corridors.

Endangered Species Habitat/Core Habitat

For millions of years, species have been evolving into a complex intertwined web, but as viable habitats are lost and species diversity decreases, the danger of a collapse of whole ecosystems becomes very real. The U.S. Fish and Wildlife Service estimates that losing one plant species can trigger the loss of up to 30 other insect, plant, and animal species. It is critical to the region's biodiversity to protect habitat for endangered species. Managers should give priority to conserving core habitats and supporting natural landscapes and their surrounding watersheds as identified by the Natural Heritage and Endangered Species Program.

Groundwater Resources

Drinking water, our most precious natural resource, is often taken for granted. Protected lands in the form of woods and wetlands are vital to the region's water supply because of their ability to recharge groundwater and act as filters for pollution. Municipalities can protect groundwater resources by using aquifer protection overlay districts and land acquisitions. Protection of land within the recharge areas to aquifers (Zone IIs and Interim Wellhead Protection Areas), as well as land immediately surrounding existing wells, is especially important.

Coastal Shorelines and Resources

Coastal shorelines support an abundance of life, are key to the region's economy, and important to our quality of life. However, shoreline habitat is rapidly diminishing due to irresponsible development, which compromises ecological functions by reducing habitat availability and negatively affecting water quality. Communities are strongly encouraged to protect natural shoreline conditions by minimizing the effects of shoreline use/development, restricting harmful activities, and reducing stormwater impacts. Degraded shoreline habitat should be restored where possible.

Surface Waters and Riparian Corridors

Surface waters provide wildlife habitat, drinking water, flood control, and areas for recreation. Riparian corridors, the vegetated lands that border surface waters, are particularly important to the health of freshwater ecosystems because they act as buffers to surrounding land uses. Protection of surface waters and adjacent riparian lands should be a land conservation priority as these areas build the foundation of open space corridors.

Forestlands

Contiguous, intact, mature forests provide habitat for many species, but they also protect our water supplies by acting as filters for nitrogen and sediment. Forests reduce erosion by slowing the rate of water runoff; regulate water levels in rivers and streams; moderate the Earth's climate by removing greenhouse gasses and producing large amounts of oxygen; and they provide areas for community recreation. Some of the most important forest areas to protect include large contiguous blocks, riparian areas, unique communities, and habitat for rare or endangered species.

Scenic & Historic Areas

Scenic open spaces maintain an area's rural character, contribute to quality of life and provide visual relief; and historic places give each community unique character. Visual quality affects how people feel about a community and influences whether they would want to live in, visit, or locate a business in a particular area. Residents and visitors alike see the majority of a community while riding in their vehicles, making scenic vistas from roadways particularly important to protect. Views from sidewalks, hiking trails, bike paths, and recreational areas also contribute to a community's desirability.

Agricultural Lands

Active agricultural lands not only provide food and contribute to the local economy, but they hold aesthetic qualities and bring a sense of place to the region. Well-managed farmland can also benefit the environment by filtering wastewater and providing groundwater recharge. Development located too close to farming operations often results in conflicts when normal farming practices are perceived to interfere with residential uses. Municipalities with prime or locally important farmland should review their regulations to ensure they support the continued operation of active farms.

B. Promote Interconnectedness of Protected Lands

Development in the watershed is fragmenting habitat and disrupting critical ecological processes. Fragmentation limits habitat, destroys wildlife corridors, and genetically isolates members of a species. Connecting and maintaining large tracts of a diverse assortment of high quality interconnected habitat types, such as forests, fields, riparian corridors, and inland and coastal wetlands is crucial to protecting biodiversity in the watershed. From a regional perspective, it is important to examine the quality and location of existing protected lands to determine if it is feasible to make connections when planning future conservation activities.

C. Protect Natural Resources through Improved Regulations and Zoning

Single-use zoning has made it impossible to recreate traditional mixed-use villages, and it has lead to sprawl development and dependence on automobiles. Most planners would agree that concentrated, walkable communities re-invigorate economically depressed areas and protect natural resources, and there is now a shift toward replacing sprawl growth with mixed-use development. Referred to as smart growth, it seeks to combine certain types of commercial uses with residential units, usually close to a public transportation source.

D. Promote Regional Cooperation in Land Protection

Critical resources, such as aquifers, river corridors, and coastlines, all cross municipal boundaries, and regional efforts to protect these areas need to be more strongly encouraged, as these shared resources are better protected when towns and land trusts work together toward a common goal. When planning future conservation efforts, contact should be made between neighboring municipalities and their respective local conservation organizations.

Non-Regulatory Land Protection Tools

Conservation Restrictions

A conservation restriction, also called a conservation easement, is one of the most promising techniques available for promoting land conservation. A conservation restriction is a strategy that allows the landowner to maintain ownership and use of the land while limiting development on the property, ensuring that the land remains in the condition the landowner wishes. A conservation restriction is an addition to the existing property deed and the conditions in the conservation restriction are binding on all future owners.

There is great flexibility in creating a conservation restriction. Activities such as farming, forest management, and other land uses that the property owner wishes to pursue are often allowed. A conservation restriction can even be tailored to exclude a portion of the property so that a future home may be built. The landowner's ability to sell the property or bequeath it to heirs remains. The tax benefits, including a reduction in estate and property taxes, are often substantial.

Land Donations

A. Gifts in Fee Simple

Most of the land protected by conservation groups and municipal conservation commissions has been acquired through outright gifts of land by generous and willing donors. If land is given for the purpose of conservation, the receiving organization is required to maintain the land in its natural state in perpetuity. However, the donor may make specific stipulations as to the use of the land such as "forever wild" or passive recreational use only. The tax benefits of gifting land are numerous – donors are entitled to an income tax deduction of the value of the property. The deduction is allowed to be up to 30% of the donor's taxable income each year for a period of five years, up to the value of the donation. In addition, this strategy eliminates both property taxes and estate taxes on the land. Land donation is a simple and highly effective means of conserving land. Much of our open space is the result of generous land donations.

B. Gift of a Remainder Interest

A landowner can give property to a conservation organization or municipal conservation commission but retain the right to live on it. At the death of the landowner, the full ownership of the land transfers to the conservation organization. A gift of a remainder interest will include mutually agreeable conditions concerning the maintenance and management of the land during the landowner's lifetime. The donor of a remainder interest can generally claim a related income tax deduction and eliminate potentially high real estate taxes.

C. Bequests

A landowner can convey land to an organization such as a land trust in their will. A deduction from the value of one's taxable estate is allowed for land bequeathed for public purposes.

D. Limited Development

Landowners may wish to protect property that has conservation value, but are not able to sacrifice what may be their most valuable asset. Limited development can serve as a workable alternative for landowners seeking to preserve their land that are in need of some direct financial gain from their property. On appropriate parcels of land, and with a cooperating developer, some development can occur while the remaining land is permanently protected through one or more of the methods described here. The new development should be strategically located to preserve the property's most critical scenic and natural resources, and the landowner will receive a cash return from the property. This land conservation method is sometimes called Conservation or Open Space Development.

E. Purchases

1. Fair Market Value

Small local land trusts and municipal conservation commissions are generally unable to purchase conservation land at fair market value. Larger regional organizations such as the Trust for Public Lands, The Trustees of Reservations, and The Nature Conservancy, are often more effective at raising large sums of money to purchase exceptional conservation land at fair market value. The Commonwealth of Massachusetts has several land conservation programs that occasionally purchase land with significant resources characteristics worth preserving. The Commonwealth prefers to acquire lands that build on its existing open space reserves. A regional land trust can act as a liaison for owners of land with outstanding resources that are competitive candidates for acquisition by other organizations and agencies.

2. Bargain Sale

Under this method, the landowner sells the property to a charitable organization for less than fair market value. The land trust benefits from the reduced costs and the "loss" can qualify the seller for income tax deductions, with an overall result comparable to a sale at market value. Bargain sales are a standard open space acquisition tool for large private land conservation organizations and the Commonwealth of Massachusetts. A small local land trust is generally unable to purchase conservation land, even at bargain sale prices. Some regional or statewide land trusts are able to use this option to protect open space deemed critical to a region's scenic and natural heritage.

3. Agricultural Preservation Restrictions

Administered by the Massachusetts Department of Agricultural Resources, the Agricultural Preservation Restriction (APR) program protects farmlands by purchasing the development rights to the land. A permanent deed restriction is placed on the property, ensuring that the farm is never developed, while the farmer is provided with cash from the sale of the development rights and the ability to continue farming. The APR program is highly competitive, with preference given to working farms, located in agriculturally productive regions of the state, with highly productive agricultural soils. Acceptance of a farm into the APR program is typically supported by a financial contribution from the local municipality

E. Establish Consistent Funding For Open Space Protection

All watershed communities need to establish a dedicated and significant funding source for land protection initiatives. The Community Preservation Act is an excellent tool for this purpose, yet only 11 of the towns in the watershed have adopted it. Public education efforts must be made before attempting to initiate a new funding source. The case can be made for land protection by highlighting the success of neighboring towns and discussing the cost saving benefits of open space versus development.

F. Increase Public Access to Protected Lands

Providing access gives the public a feeling of ownership of the land, which in turn leads to greater support for the protection of open space. Public access is an important aspect in open space planning, however, each situation requires careful consideration. Managers must consider the fragility and uniqueness of the natural resources contained therein when determining the type or degree of access allowed. In certain cases, allowing access may be detrimental. Protection efforts within each community should include planning for an assortment of property types (e.g. forests, fresh water, coastlines) that will serve as dedicated access areas.

G. Strategize For Large and Continuous Tracts of Land

Conserving large tracts of contiguous land not only protects the genetic viability and long-term survival rate of many diverse species, but it also protects fragile ecological processes. Regional planners should identify and protect the remaining areas of the watershed that contain sizable and undeveloped blocks of land.

Management Approaches

As illustrated by the discussion above, numerous entities have important roles in meeting the goals and objectives of this action plan, and numerous strategies can be implemented. Because the purchase in fee of open space can be costly, and state and local government typical have limited funds for these purchases, it is important that municipalities, open space committees, and land trusts develop broad strategies and goals for open space protection that go beyond acquisition alone. These strategies should be articulated in municipal open space plans, master plans, and reflected in town laws, regulations, and policies.

Towns and land trusts need to acquire the most important properties, or work with property owners to permanently protect their properties for conservation purposes. The best agricultural lands should also be preserved for future agricultural purposes. Because the acquisition of open space can be expensive, even for properties mostly wet, the use of conservation restrictions and agricultural preservation restrictions are important tools to encourage private open space protection. These private land protection strategies are driven by financial and tax benefit incentives offered by government.

Each municipality should ensure it has a valid open space and recreation plan on file with the Division of Conservation Services, and these must be updated every seven years. In 2011, about a third of Buzzards Bay communities were without a valid plan, and some have never prepared a plan. Communities without an up-to-date open space plan are ineligible for state grants under the Commonwealth's land protection programs. These plans should target the most important core endangered and threatened species habitats and supporting biohabitats as identified by the Natural Heritage and Endangered Species Program.

Municipalities with approved open space plans also need to take advantage of state and federal grant programs so that local dollars can be more effectively available to leverage state and federal funds. Too often municipalities fail to seek state or federal funding because of insufficient local planning. The Commonwealth of Massachusetts and state legislature should also ensure that sufficient funds are dedicated to land protection grant programs and Community Preservation Act matching. EEA should consider $500,000 annually as a minimum target for land acquisition and protection in the Buzzards Bay watershed. This funding could also be used to help match and leverage federal and local grants. This approach would require either special legislation, or inclusion in the Governor's budget.

In the case of state grant programs, municipalities must also annually participate in the Commonwealth Capital reporting program. Municipal Commonwealth Capital scores are now used in dozens of state grant programs, often accounting for up to a third of the grant scoring criteria. Because of the importance of Commonwealth Capital scoring, the Office of Community Preservation, which oversees the evaluation program, should revise its Commonwealth Capital scoring formula to weigh more heavily environmental protection measures in communities, such as integrated water management plans, in its scoring.

To assist with these efforts, the Buzzards Bay NEP should continue to assist municipalities with the development of open space and recreation plan updates, natural resource mapping, and the development of grant applications.

Similarly, all Buzzards Bay municipalities should consider adopting the Community Preservation Act to create a dedicated fund for open space protection and other program goals. This approval requires a majority vote by residents in a general election. Currently eleven of the seventeen principal municipalities in the watershed have adopted the law. Outreach to and education of the municipal legislative branch and the public is required to build support for passage.

Table 42. Sample parcel acquisition rating matrix proposed in the Buzzards Bay NEP's Regional Open Space Plan.

SCORE:	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Score Descriptor:		Barely Acceptable		Below Average		Average		Above Average		Exceptional	
1. Salt marsh		10% of parcel		30%		50%		70%		90%	
2. Endangered Species Habitat		"Watch list" habitat,1 species		"Watch list" habitat,2 species		"Watch list" or threatened breeding habitat,1 species		Threatened breeding, 2 species, endangered habitat		Endangered breeding	
3. Water Supply Protection		Within watershed to well (Zone III)		No well, but low yield aquifer		No well, but high-med yield aquifer		Within 1000-2000 ft. of wetlands or glacial outwash		Within 400-1000 ft. of existing well	
4. Coastal Water Quality	The location of the parcel in the watershed relative to receiving waters and existing or potential pollution sources is of key importance. Sliding scale with land directly abutting water body receiving a 10.										
5. Coastal Habitat		100 ft. of shoreline		300 ft.		500 ft.		700 ft.		900 ft.	
6. Freshwater Resources		50 ft. along water body		150 ft.		250 ft.		350 ft.		450 ft.	
7. Habitat Restoration	One point for each of the following criteria met: herring run restoration, remove fill from salt marsh or freshwater wetland, wetland restoration (no fill), remediate tidal restriction, or dam removal.										
8. Core Habitat		10% of parcel		30%		50%		70%		90%	
9. Fix Environmental Problem		Multiple options available to solve problem				Use of conservation restriction will solve problem				Purchase only way to solve problem	
10. Expanding Conservation Areas		Within 300 ft of existing protected area		Within 100 ft.		Directly abutting boundary		50% of one boundary		All of one boundary	
11. Fresh Water Quality	The location of the parcel in the watershed relative to receiving waters and existing or potential pollution sources is of key importance. Sliding scale with land directly abutting water body receiving a 10.										
12. Freshwater Wetlands		10% of parcel		30%		50%		70%		90%	
13. Size		5 acres		15 acres		25 acres		35 acres		50 acres	
14. Coastal Resources		10% of parcel		30%		50%		70%		90%	
15. Adjacent to Salt marsh		30 ft. buffer provided		60 ft. buffer		90 ft. buffer		120 ft. buffer		150 ft. buffer	
16. Development Threat-must have frontage on existing or approved road		for sale sign posted				Ch. 61, 61A, 61B release notice given				approved subdivision	
17. Supporting Landscapes/ Watersheds		10% of parcel		30%		50%		70%		90%	
18. Linkages		narrow connection				narrow, but connects large (20+ ac) blocks				wide, connects large blocks	
19. Adjacent to Freshwater Wetlands		30 ft. buffer provided		60 ft. Buffer		90 ft. buffer		120 ft. buffer		150 ft. buffer	
20. Passive Recreation		Next to existing trail or shore access				Existing trail or shore access				existing trail/ shore access & next to more trail land/ shore access	
21. Aesthetics		scenic vista w/ views from public road								scenic vista with parking	
22. Agricultural Lands		5 acres		10 acres		15 acres		20 acres		25 acres	

To supplement government driven land acquisitions, all municipalities should adopt various smart growth planning techniques that best protect their critical resources and minimize growth impacts on water quality and habitat. These techniques could include mandatory cluster zoning; transfer of development rights; water resources protection overlay districts; and prohibitions on building in the velocity zone. Each municipality must decide what technique works best in their community. These approaches are achieved through the passage of municipal laws (bylaws or ordinances) and regulations.

Sufficient models exist for the development of laws and regulations to promote open space protection, and the Buzzards Bay NEP could disseminate, and where needed refine, model bylaws to meet local needs. The greatest challenge in adopting local strategies is building public support for passage at town meeting and in general municipal elections. Citizens groups and land trusts

often help with these efforts and general public outreach efforts.

Municipalities could also protect the most valuable open space and wetlands, by adopting local wetlands bylaws and regulations to address current weaknesses in state and federal wetlands laws and regulations. A fuller explanation of these approaches is described in Action Plan 7 Protecting and Restoring Wetlands.

In the Buzzards Bay watershed, the Buzzards Bay Coalition has shown strong leadership in protecting open space, and coordinating with local, regional, and national land trusts to protect some of the most vital resources of Buzzards Bay. The Coalition needs to continue this effort and expand their support for regional open space protection goals. The Coalition should continue to provide technical assistance to communities, area land trusts, and landowners with land protection projects.

Each of the more than a dozen land trusts that operate in the Buzzards Bay watershed need to maintain and in some cases expand their efforts to protect open space. Collectively these groups will have the greatest impact on protecting water quality and living resources in the Buzzards Bay watershed including: freshwater and saltwater wetlands, naturally vegetated riparian areas, interconnected forested areas, undeveloped coastal habitat, ground and surface water resources, and "core habitats" as identified by the Natural Heritage and Endangered Species Program. Land trusts should provide greater public access to protected lands, which allows the public to feel a sense of ownership, leading to increased support for land protection initiatives.

In 2008, working with Buzzards Bay municipalities and area land trusts, the Buzzards Bay NEP developed a regional open space plan for the Buzzards Bay watershed. DCR and other state agencies should utilize the information on priority areas in this open space plan as part of their criterion for land grant awards.

With respect to agricultural lands, DAR should establish broader environmental resource protection criteria such as ancillary ecological benefits, proximity to NHESP priority habitats, and organic farming in its criteria for selecting properties to receive APR funding. Similar criteria should be considered in federal programs administered by USDA.

Financial Approaches

Adoptions of laws and regulations that promote open space generally have little direct costs. In fact, many growth techniques save developers and the taxpayer money by reducing infrastructure construction and maintenance costs. Development and update of open space plans can be done in-house by municipalities with assistance from the Buzzards Bay NEP or land trusts, or completed by a contractor to the municipality (an expenditure perhaps totaling $20,000).

The most substantial cost for open space protection is the acquisition of lands in fee by municipalities or land trusts. Towns and land trusts can acquire open space through land or cash donations, municipal appropriations, or by grants. Often land acquisitions are complex, and may involve funding from multiple sources.

Land trusts often encourage donations by educating property owners of tax write-off opportunities of making donations of land or of conservation restrictions. The placement of conservation restrictions can also reduce a property's assessed value, which in turn lowers annual property taxes. More widespread efforts to make property owners aware of these strategies could help meet local goals of open space protection.

Monitoring Progress

Ultimately, the number of acres of wetlands and habitat protected (by a community and in the watershed) is the principal mechanism of tracking the success of this action plan. Programmatic tracking of municipal actions, like the approval of open space plans, adopting the Community Preservation Act, or adoption of smart growth laws and regulations are all meaningful measures of success. Elements of existing state tracking programs like the municipal Commonwealth Capital score could also provide a metric for tracking municipal actions.